

## SEQUENCE LISTING

<110> Manning, William C., Jr.  
 Dwarki, Varavani J.  
 Rendahl, Katherine  
 Zhou, Shang-Zhen  
 McGee, Laura H.  
 Lau, Dana  
 Flannery, John G.  
 Miller, Sheldon  
 Wang, Fei  
 Di Polo, Adriana

<120> USE OF RECOMBINANT GENE DELIVERY VECTORS  
 FOR TREATING OR PREVENTING DISEASES OF THE EYE

<130> PP1588.005 (20263.50)

<140> US/10/

<141> 2002-03-04

<160> 12

<170> FastSEQ for Windows Version 4.0

<210> 1

<211> 6514

<212> DNA

<213> Homo sapien

<400> 1

accatgtagc	ggccctgcgc	gtcgcctcgc	tactgagggc	cgcccgggca	aagcccgggc	60
gtcgggcgac	ctttggtcgc	ccggcctcag	tgagcgagcg	agcgcgacga	gagggagtg	120
ccaactccat	cactaggggt	tccttgtagt	taatgattaa	cccgccatgc	tacttatcta	180
cgtagccatg	ctctagggaa	ttggccgcgc	aatttcgact	ctaggccatt	gcatacggtg	240
tatctatatc	ataatatgta	catttatatt	ggctcatgtc	caatatgacc	gccatgttga	300
cattgattat	tgactagtta	ttaatagtaa	tcaattacgc	ggtcattagt	tcatagccca	360
tatatggagt	tccgcgttac	ataacttacg	gtaaatggcc	cgcctggctg	accgccaac	420
gaccccgccc	cattgacgtc	aataatgacg	tatgttccca	tagtaacgcc	aatagggact	480
ttccattgac	gtcaatgggt	ggagtattta	cggtaaactg	cccacttggc	agtacatcaa	540
gtgtatcata	tgccaagtcc	gccccctatt	gacgtcaatg	acggtaaagt	gcccgcctgg	600
cattatgccc	agtacatgac	cttacgggac	tttctactt	ggcagtacat	ctacgtatta	660
gtcatcgcta	ttaccatggg	gatgcgggtt	tggcagtaca	ccaatgggcg	tggatagcgg	720
tttgactcac	ggggatttcc	aagtctccac	cccattgacg	tcaatgggag	tttgttttgg	780
cacaaaatc	aacgggactt	tccaaaatgt	cgtaataacc	ccgccccgtt	gacgcaaagt	840
ggcggtaggc	gtgtacgggt	ggaggtctat	ataagcagag	ctcgtttagt	gaaccgtcag	900
atcgcttgga	gacgccatcc	acgctgtttt	gacctccata	gaagacaccg	ggaccgatcc	960
agcctccgcg	gccgggaacg	gtgcattgga	acgcggatcc	cccggtgcaa	gagtgcagta	1020
agtaccgcct	atagactcta	taggcacacc	cctttggctc	ttatgcatgc	tatactgttt	1080
ttggcttgga	gcctatacac	ccccgctcct	tatgctatag	gtgatggtat	agcttagcct	1140
ataggtgtgg	gttattgacc	attattgacc	actcccctat	tggtagacat	actttccatt	1200

actaatccat	aacatggctc	tttggcacia	ctatctctat	tggctatatg	ccaatactct	1260
gtccttcaga	gactgacacg	gactctgtat	ttttacagga	tgggggtccat	ttattattta	1320
caaattcaca	tatacaacia	cgccgtcccc	cgtgcccgcga	gtttttatta	aacatagcgt	1380
gggatctccg	acatctcggg	tacgtgttcc	ggacatgggc	tcttctccgg	tagcggcgga	1440
gcttccacat	ccgagccctg	gtcccatccg	tccagcggct	catggtcgct	cggcagctcc	1500
ttgtcctaa	cagtggaggc	cagacttagg	cacagcacia	tgcccaccac	caccagtgtg	1560
ccgcacaagg	ccgtggcggg	agggatatgt	tctgaaaatg	agctcggaga	ttgggctcgc	1620
acctggacgc	agatggaaga	cttaaggcag	cggcagaaga	agatgcaggc	agctgagttg	1680
ttgtattctg	ataagagtca	gaggtaactc	ccgttgccgt	gctgttaacg	gtggagggca	1740
gtgtagtctg	agcagtactc	gttgctgcgg	cgccgcgccac	cagacataat	agctgacaga	1800
ctaacagact	gttcccttcc	atgggtcttt	tctgcagtca	ccgtcgtcga	cctaagaatt	1860
caggcctaag	cttcctaggt	atcgatctcg	agcaagtcta	gagggagacc	acaacggttt	1920
ccctctagcg	ggatcaattc	cgcccccccc	cctaacgtta	ctggccgaag	ccgcttgga	1980
taaggccggg	gtgcgtttgt	ctatatgtta	ttttccacca	tattgccgtc	ttttggcaat	2040
gtgagggccc	ggaaacctgg	ccctgtcttc	ttgacgagca	ttcctagggg	tctttccctt	2100
ctcgccaaag	gaatgcaagg	tctgttgaat	gtcgtgaagg	aagcagttcc	tctggaagct	2160
tcttgaagac	aaacaacgtc	tgtagcgacc	ctttgcaggc	agcggaaacc	cccacctggc	2220
gacaggtgcc	tctgcggcca	aaagccacgt	gtataagata	cacctgcaaa	ggcggcacia	2280
ccccagtgcc	acgttgtgag	ttggatagtt	gtggaaagag	tcaaattggc	ctcctcaagc	2340
gtattcaaca	aggggctgaa	ggatgcccag	aaggtaaccc	attgtatggg	atctgatctg	2400
gggcctcggg	gcacatgctt	tacatgtgtt	tagtcgaggt	taaaaaacg	tctaggcccc	2460
ccgaaccacg	gggacgtggg	tttcctttga	aaaacacgat	aataccatgg	ccgcggggag	2520
catcaccacg	ctgccagccc	tgccggagga	cggcggcagc	ggcgctttcc	cgccggggcca	2580
cttcaaggac	cccaagcggc	tgtactgcaa	gaacgggggc	ttcttctctg	gcacccaccc	2640
cgacggccga	gtggacgggg	tccgcgagaa	gagcgaccca	cacatcaaac	tacaacttca	2700
agcagaagag	agaggggttg	tgtctatcaa	aggagtgtgt	gcaaaccggt	accttgctat	2760
gaaagaagat	ggaagattac	tagcttctaa	atgtgttaca	gacgagtgtt	tcttttttga	2820
acgattggag	tctaataact	acaatactta	ccggtcaagg	aaatacacca	gttgggtatg	2880
ggcactgaaa	cgaactgggc	agtataaact	tggatccaaa	acaggacctg	ggcagaaagc	2940
tatacttttt	cttccaatgt	ctgctaagag	ctgatcttaa	tggcagcatc	tgatctcatt	3000
ttacatgaag	ctgggtggcat	ccctgtgacc	cctccccagt	gcctctcctg	gccctggaag	3060
ttgccactcc	agtgccacc	agccttgtcc	taataaaaatt	aagttgcac	atthttgtctg	3120
actaggtgtc	cttctataat	attatggggg	ggaggggggt	ggtatggagc	aaggggcaag	3180
ttgggaagac	aacctgtagg	gcctgcgggg	tctattggga	accaagctgg	agtgcagttg	3240
cacaatcttg	gctcactgca	atctccgcct	cctgggttca	agcgattctc	ctgcctcagc	3300
ctcccagatt	gttgggattc	caggcatgca	tgaccagget	cagctaattt	ttgttttttt	3360
ggtagagacg	gggtttcacc	atattggcca	ggctgggtctc	caactcctaa	tctcaggtga	3420
tctaccaccc	ttggcctccc	aaattgctgg	gattacaggc	gtgaaccact	gctcccttcc	3480
ctgtccttct	gatttttaaa	taactatacc	agcaggagga	cgtccagaca	cagcataggc	3540
tacctggcca	tgcccaaccg	gtgggacatt	tgagttgctt	gcttggcact	gtcctctcat	3600
gcgttgggtc	cactcagtag	atgcctgttg	aattatcgga	tccactacgc	gttagagctc	3660
gctgatcagc	ctcgactgtg	ccttctagtt	gccagccatc	tggtgtttgc	ccctcccccg	3720
tgccttcctt	gaccttgga	ggtgccactc	ccactgtcct	ttcctaataa	aatgaggaaa	3780
ttgcatcgca	ttgtctgagt	aggtgtcatt	ctattctggg	gggtgggggtg	gggcaggaca	3840
gcaaggggga	ggattgggaa	gacaatagca	gggggggtggg	cgaagaactc	cagcatgaga	3900
tccccgcgct	ggaggatcat	ccagccaatt	ccctagagca	tggctacgta	gataagtagc	3960
atggcggggt	aatcattaac	tacaaggaac	ccctagtgat	ggagttggcc	actccctctc	4020
tgcgcgctcg	ctcgctcact	gaggccgggc	gaccaaaggt	cgcccgacgc	ccgggctttg	4080
ccggggcggc	ctcagtgagc	gagcgagcgc	gcaggggggtg	ggcgaagaac	tccagcatga	4140
gatccccgcg	ctggaggatc	atccagccgg	cgtcccggaa	aacgattccg	aagcccaacc	4200
tttcatagaa	ggcggcgggtg	gaatcgaaat	ctcgtgatgg	caggttgggc	gtcgcttggt	4260
cggtcatttc	gaaccccgga	gtcccgtca	gaagaactcg	tcaagaaggc	gatagaaggc	4320
gatgcgctgc	gaatcgggag	cggcgatacc	gtaaagcacg	aggaagcggg	cagcccatte	4380
gccgccaagc	tcttcagcaa	tatcacgggt	agccaacgct	atgtcctgat	agcgggtccg	4440

cacacccagc	cggccacagt	cgatgaatcc	agaaaagcgg	ccattttcca	ccatgatatt	4500
cggcaagcag	gcatcgccat	gggtcacgac	gagatcctcg	ccgtcgggca	tgcgcgctt	4560
gagcctggcg	aacagttcgg	ctggcgogag	ccccgatgc	tcttcgtcca	gatcatcctg	4620
atcgacaaga	ccggtttcca	tccgagtagc	tgctcgctcg	atgcgatgtt	tcgcttggtg	4680
gtcgaatggg	caggtagccg	gatcaagcgt	atgcagccgc	cgcattgcat	cagccatgat	4740
ggatactttc	tcggcaggag	caaggtgaga	tgacaggaga	tcctgccccg	gcacttcgcc	4800
caatagcagc	cagtccttcc	ccgcttcagt	gacaacgtcg	agcacagctg	cgcaaggaac	4860
gcccgtcgtg	gccagccacg	atagccgcgc	tgccctcgcc	tgcatgttcat	tcagggcacc	4920
ggacaggtcg	gtcttgacaa	aaagaaccgg	gcgccccctg	gctgacagcc	ggaacacggc	4980
ggcatcagag	cagccgattg	tctgtttgtg	ccagtcatag	ccgaatagcc	tctccaccca	5040
agcggccgga	gaacctgcgt	gcaatccatc	ttgttcaatc	atgcgaaacg	atcctcatcc	5100
tgtctcttga	tcagatcttg	atccccctgc	ccatcagatc	cttggcggga	agaaagccat	5160
ccagtttact	ttgcagggtc	tcccaacctt	accagagggc	gccccagctg	gcaattccgg	5220
ttcgcttgct	gtccataaaa	ccgcccagtc	tagctatcgc	catgtaagcc	cactgcaagc	5280
tacctgcttt	ctctttgcgc	ttgcgttttc	ccttgctccag	atagcccagt	agctgacatt	5340
catccggggg	cagcaccgtt	tctgcggact	ggctttctac	gtgttccgct	tccttttagca	5400
gcccttgccg	cctgagtgct	tgccgcagcg	tgaagctgtc	aattccgcgt	taaatttttg	5460
ttaaatcagc	tcatttttta	accaataggc	cgaaatcggc	aaaatccctt	ataaatcaaa	5520
agaatagccc	gagataggg	tgagtgttgt	tccagtttgg	aacaagagtc	cactattaaa	5580
gaacgtggac	tccaacgtca	aagggcgaaa	aaccgtctat	cagggcgatg	gcggatcagc	5640
ttatgcgggtg	tgaatatccg	cacagatgcg	taaggagaaa	ataccgcac	aggcgctcct	5700
ccgcttcctc	gctcactgac	tcgctgcgct	cggtcgttcg	gctgcggcga	gcggtatcag	5760
ctcactcaaa	ggcggtaata	cggttatcca	cagaatcagg	ggataacgca	ggaaagaaca	5820
tgtgagcaaa	aggccagcaa	aaggccagga	accgtaaaaa	ggccgcgttg	ctggcgtttt	5880
tccataggct	ccgccccctc	gacgagcatc	acaaaaatcg	acgctcaagt	cagaggtggc	5940
gaaacccgac	aggactataa	agataccagg	cgtttcccc	tggaagctcc	ctcgtgcgct	6000
ctcctgttcc	gaccctgcg	cttaccggat	acctgtccgc	ctttctccct	tcgggaagcg	6060
tggcgctttc	tcatagtcca	cgctgtaggt	atctcagttc	ggtgtaggtc	gttcgctcca	6120
agctgggctg	tgtgcacgaa	cccccgcttc	agcccgaccg	ctgcgcctta	tccggtaact	6180
atcgtcttga	gtccaacccg	gtaagacacg	acttatcgcc	actggcagca	gccactggta	6240
acaggattag	cagagcgagg	tatgtaggcg	gtgctacaga	gttcttgaag	tggtggccta	6300
actacggcta	cactagaagg	acagtatttg	gtatctgcgc	tctgctgaag	ccagttacct	6360
tcggaaaaag	agttggtagc	tcttgatccg	gcaaacaaac	caccgctggg	agcggcggtt	6420
ttttgtttgc	aagcagcaga	ttacgcgcag	aaaaaaagga	tctcaagaag	atcctttgat	6480
cttttcttac	tgaacgggtga	tccccaccgg	aatt			6514

&lt;210&gt; 2

&lt;211&gt; 5610

&lt;212&gt; DNA

&lt;213&gt; Homo sapien

&lt;400&gt; 2

aaaacttgcg	gcccgggaat	ttcgactcta	ggccattgca	tacgttggtat	ctatatcata	60
atatgtacat	ttatattggc	tcatgtccaa	tatgaccgcc	atgttgacat	tgattattga	120
ctagttatta	atagtaatca	attacggggg	cattagttca	tagcccatat	atggagttcc	180
gcgttacata	acttaaggta	aatggccgcg	ctggctgacc	gccaacgac	ccccgcccat	240
tgacgtcaat	aatgacgtat	gttcccatag	taacgccaat	agggactttc	cattgacgtc	300
aatgggtgga	gtatttaagg	taaactgccc	acttggcagt	acatcaagtg	tatcatatgc	360
caagtccgcc	ccctattgac	gtcaatgacg	gtaaattggc	cgcctggcat	tatgcccgat	420
acatgacctt	acgggacttt	cctacttggc	agtagatcta	cgtattagtc	atcgctatta	480
ccatggtgat	gcgggttttg	cagtagacca	atgggcgtgg	atagcgggtt	gactcacggg	540
gatttccaag	tctccacccc	attgacgtca	atgggagttt	gttttggcac	caaaatcaac	600
gggactttcc	aaaatgtcgt	aataaccccc	ccccgttgac	gcaaattggg	ggtaggcgtg	660

tacggtggga	ggtctatata	agcagagctc	gtttagtga	ccgtcagatc	gcctggagac	720
gccatccacg	ctgttttgac	ctccatagaa	gacaccggga	ccgatccagc	ctccgcggcc	780
gggaacggtg	cattggaacg	cggattcccc	gtgccaagag	tgacgtaagt	accgcctata	840
gactctatag	gcacacccct	ttggctctta	tgcatgctat	actgtttttg	gcttggggcc	900
tatacacccc	cgctccttat	gctatagggtg	atggtatagc	ttagcctata	ggtgtggggt	960
attgaccatt	attgaccact	cccctattgg	tgacgatact	ttccattact	aatccataac	1020
atggctcttt	gccacaacta	tctctattgg	ctatatgcc	atactctgtc	cttcagagac	1080
tgacacggac	tctgtatttt	tacaggatgg	ggtccattta	ttatttacia	attcacatat	1140
acaacaacgc	cgtcccccg	gcccgcagtt	tttattaaac	atagcgtggg	atctccgaca	1200
tctcgggtac	gtgttcggga	catgggctct	tctccggtag	cggcggagct	tccacatccg	1260
agccctggtc	ccatccgtcc	agcggctcat	ggctcgctcg	cagctccttg	ctcctaacag	1320
tggaggccag	acttaggcac	agcacaatgc	ccaccaccac	cagtgtgccg	cacaaggccg	1380
tggcggtagg	gtatgtgtct	gaaaatgagc	tccggagattg	ggctcgacc	tggacgcaga	1440
tggaagactt	aaggcagcgg	cagaagaaga	tgacggcagc	tgagttgttg	tattctgata	1500
agagtcagag	gtaactcccg	ttgcggtgct	gttaacgggtg	gagggcagtg	tagtctgagc	1560
agtactcggt	gctgccgcgc	gcgccaccag	acataatagc	tgacagacta	acagactggt	1620
cctttccatg	ggtcttttct	gcagtcaccg	tcgtcgacct	aagaattcgc	ccttcgaaac	1680
catgaacttt	ctgctgtctt	gggtgcattg	gagccttgcc	ttgctgctct	acctccacca	1740
tgccaagtgg	tcccaggctg	caccatggc	agaaggagga	gggcagaatc	atcacgaagt	1800
ggtgaagtcc	atggatgtct	atcagcgag	ctactgccat	ccaatcgaga	ccctggtgga	1860
catcttccag	gagtaccctg	atgagatcga	gtacatcttc	aagccatcct	gtgtgcccct	1920
gatgcgatgc	gggggctgct	gcaatgacga	gggcctggag	tgtgtgcca	ctgaggagtc	1980
caacatcacc	atgcagatta	tgcgatcaa	acctcaccaa	ggccagcaca	taggagagat	2040
gagcttccta	cagcacaaca	aatgtgaatg	cagaccaaag	aaagatagag	caagacaaga	2100
aaatccctgt	gggccttgct	cagagcggag	aaagcatttg	ttgtacaag	atccgcagac	2160
gtgtaaatgt	tccgtcaaaa	acacagactc	gcgttgcaag	gcgaggcagc	ttgagttaaa	2220
cgaacgtact	tgcatagtgt	acaagccgag	gcggtgagcc	gggcaggagg	aaggagcctc	2280
cctcagggtt	tccgggaacca	gatctctcac	caggaaagac	tgatacagaa	agggcgcaatt	2340
caggcctaag	cttcctaggt	atcgatctcg	agcaagtcta	gaaagccatg	gatatcgat	2400
ccactacgcy	ttagagctcg	ctgatcagcc	tcgactgtgc	cttctagtgt	ccagccatct	2460
gttgtttgcc	cctcccccg	gccttccttg	accctggaag	gtgccactcc	cactgtcctt	2520
tcctaataaa	atgaggaaat	tgcatcgcat	tgtctgagta	ggtgtcattc	tattctgggg	2580
ggtgggggtg	ggcaggacag	caagggggag	gattgggaag	acaatagcag	gggggtgggc	2640
gaagaactcc	agcatgagat	ccccgcgctg	gaggatcatc	cagctagcaa	gtcccacag	2700
tgatggagtt	ggccactccc	tctctgcgcy	ctcgctcgct	cactgaggcc	gggcgaccaa	2760
aggtcgccc	acgcccgggc	tttgcccggg	cggcctcagt	gagcgagcga	gcgcgccagc	2820
gattctcttg	tttgetccag	actctcaggc	aatgacctga	tagcctttgt	agagacctct	2880
caaaaatagc	taccctctcc	ggcatgaatt	tatcagctag	aacggttgaa	tatcatattg	2940
atggtgattt	gactgtctcc	ggcctttctc	acccgtttga	atctttacct	acacattact	3000
caggcattgc	atttaaaata	tatgagggtt	ctaaaaattt	ttatccttgc	gttgaaataa	3060
aggcttctcc	cgcaaaaagta	ttacagggtc	ataatgtttt	tggtacaacc	gatttagctt	3120
tatgctctga	ggcctttattg	cttaattttg	ctaattcttt	gccttgccctg	tatgatttat	3180
tggatgttgg	aattcctgat	gcggtatttt	ctccttacgc	atctgtgcgg	tatttcacac	3240
cgcataatgg	gcactctcag	tacaatctgc	tctgatgcgc	catagttaag	ccagccccga	3300
caccgcgcaa	caccgctga	cgcgcctga	cgggcttgtc	tgctcccggc	atccgcttac	3360
agacaagctg	tgaccgtctc	cgggagctgc	atgtgtcaga	ggttttcacc	gtcatcaccg	3420
aaacgcgcga	gacgaaaggg	cctcgtgata	cgcctatttt	tatagggtta	tgcatgata	3480
ataatggttt	cttagacgtc	aggtggcact	tttcggggaa	atgtgcgcgg	aaccctatt	3540
tgtttatttt	tctaaataca	ttcaaataatg	tatccgctca	tgagacaata	accctgataa	3600
atgcttcaat	aatattgaaa	aaggaagagt	atgagtattc	aacatttccg	tgtcgccctt	3660
attccctttt	ttgcggcatt	ttgccttctc	gtttttgtct	acccagaaac	gctggtgaaa	3720
gtaaaagatg	ctgaagatca	gttgggtgca	cgagtgggtt	acatcgaaact	ggatctcaac	3780
agcggtaaga	tccttgagag	ttttcgcccc	gaagaacgtt	ttccaatgat	gagcactttt	3840
aaagtctctg	tatgtggcgc	ggtattatcc	cgtattgacg	ccgggcaaga	gcaactcgg	3900

cgccgcatac	actattotca	gaatgacttg	gttgagtact	caccagtcac	agaaaagcat	3960
cttacggatg	gcatgacagt	aagagaatta	tgcagtgtcg	ccataaccat	gagtataaac	4020
actgcggcca	acttacttct	gacaacgatc	ggaggaccga	aggagctaac	cgcttttttg	4080
cacaacatgg	gggatcatgt	aactcgcctt	gatcgttggg	aaccggagct	gaatgaagcc	4140
ataccaaacg	acgagcgtga	caccacgatg	cctgtagcaa	tggcaacaac	gttgcgcaaa	4200
ctattaactg	gcgaactact	tactctagct	tcccggcaac	aattaataga	ctggatggag	4260
gcggataaaag	ttgcaggacc	acttctgcgc	tccggccctt	cggctggctg	gtttattgct	4320
gataaatctg	gagccggtga	gcgtgggtct	cgcggtatca	ttgcagcact	ggggccagat	4380
ggtaagccct	cccgtatcgt	agttatctac	acgacgggga	gtcaggcaac	tatggatgaa	4440
cgaaatagac	agatcgtctg	gatagggtgcc	tcaactgatta	agcattggta	actgtcagac	4500
caagtttact	catatatact	ttagattgat	ttaaaacttc	atttttaatt	taaaaggatc	4560
taggtgaaga	tcctttttga	taatctcatg	accaaatacc	cttaacgtga	gttttcgttc	4620
cactgagcgt	cagaccccg	agaaaagatc	aaaggatctt	cttgagatcc	tttttttctg	4680
cgcgtaatct	gctgcttgca	aacaaaaaaa	ccaccgctac	cagcgggtgg	ttgtttgccg	4740
gatcaagagc	taccaactct	ttttccgaag	gtaactggct	tcagcagagc	gcagatacca	4800
aatactgtcc	ttctagtgtg	gccgtagtta	ggccaccact	tcaagaactc	tgtagcaccg	4860
cctacatacc	tcgctctgct	aatcctgtta	ccagtggctg	ctgccagtgg	cgataagtgc	4920
tgtcttaccg	ggttggactc	aagacgatag	ttaccggata	aggcgcagcg	gtcgggctga	4980
acgggggggt	cgtgcacaca	gccagccttg	gagcgaacga	cctacaccga	actgagatac	5040
ctacagcgtg	agctatgaga	aagcgccacg	cttcccgaag	ggagaaaggc	ggacagggtat	5100
ccggtaagcg	gcagggtcgg	aacaggagag	cgacagaggg	agcttccagg	gggaaacgcc	5160
tggtatcttt	atagtccctg	cgggtttcgc	cacctctgac	ttgagcgtcg	atttttgtga	5220
tgctcgtcag	gggggaggag	cctatggaaa	aacgccagca	acgcggcctt	tttacggttc	5280
ctggcctttt	gctggccttt	tgctcacatg	ttctttcctg	cgttatcccc	tgattctgtg	5340
gataaccgta	ttaccgcctt	tgagtgcgtc	gataccgctc	gccgcagccg	aacgaccgag	5400
cgcgagcagt	tacgtgagca	ggaagcggaa	gagcgcccaa	tacgcaaacc	gcctctcccc	5460
gogcggttgg	cgattcatta	atgcagctgg	cgcgctcgct	cgctcactga	ggccgcccgg	5520
gcaaagcccg	ggcgctgggc	gacctttggt	cgcccggcct	cagtgcgcga	gcgagcgcgc	5580
agagagggag	tggccaactc	catcactgat				5610

&lt;210&gt; 3

&lt;211&gt; 7096

&lt;212&gt; DNA

&lt;213&gt; Homo sapien

&lt;400&gt; 3

aaaacttgcg	gcgcgggaat	ttcgactcta	ggccattgca	tacgttgtat	ctatatcata	60
atatgtacat	ttatatggc	tcatgtccaa	tatgaccgcc	atgttgacat	tgattattga	120
ctagttatta	atagtaatca	attacggggt	cattagtcca	tagcccatat	atggagttcc	180
gcgttacata	acttacggta	aatggccccg	ctggctgacc	gcccacgac	ccccgcccat	240
tgacgtcaat	aatgacgtat	gttcccatag	taacgccaat	agggactttc	cattgacgtc	300
aatgggtgga	gtattttacg	taaaactgcc	acttggcagt	acatcaagtg	tatcatatgc	360
caagtccgcc	ccctattgac	gtcaatgacg	gtaaatggcc	cgcttggcat	tatgcccgat	420
acatgacctt	acgggacttt	cctacttggc	agtacatcta	cgtattagtc	atcgctatta	480
ccatggtgat	gcgggttttg	cagtacacca	atgggcgtgg	atagcggttt	gactcacggg	540
gattttcaag	tctccacccc	attgacgtca	atgggagttt	gttttggcac	caaaatcaac	600
gggactttcc	aaaatgtcgt	aataaccccg	ccccgttgac	gcaaatgggc	ggtaggcgtg	660
tacggtggga	ggtctatata	agcagagctc	gtttagttaa	ccgtcagatc	gcctggagac	720
gccatccacg	ctgttttgac	ctccatagaa	gacaccggga	ccgatccagc	ctccgcggcc	780
gggaacggtg	cattggaacg	cggattcccc	gtgccaagag	tgacgtaagt	accgcctata	840
gactctatag	gcacaccctt	ttggctctta	tgcattgctat	actgtttttg	gcttggggcc	900
tataaccccc	cgctccttat	gctatagggt	atggatatagc	ttagcctata	gggtgtgggt	960
attgaccatt	attgaccact	cccctattgg	tgaogatact	ttccattact	aatccataac	1020
atggctcttt	gccacaacta	tctctattgg	ctatatgcca	atactctgtc	cttcagagac	1080

tgacacggac	tctgtat	tacaggatgg	ggtccattta	ttattttacaa	attcacatat	1140
acaacaacgc	cgtcccccgt	gcccgcagtt	tttattaaac	atagcgtggg	atctccgaca	1200
tctcgggtac	gtgttccgga	catgggctct	tctccggtag	cggcggagct	tccacatccg	1260
agccctggtc	ccatccgtcc	agcggctcat	ggtcgctcgg	cagctccttg	ctcctaacag	1320
tggaggccag	acttaggcac	agcacaatgc	ccaccaccac	cagtgtgccg	cacaaggccg	1380
tggcggtagg	gtatgtgtct	gaaaatgagc	tcggagattg	ggctcgcacc	tggacgcaga	1440
tggaagactt	aaggcagcgg	cagaagaaga	tgcaggcagc	tgagttgttg	tattctgata	1500
agagtcagag	gtaactcccg	ttgcggtgct	gttaacgggtg	gagggcagtg	tagtctgagc	1560
agtactcggt	gctgccgcgc	gcgccaccag	acataatagc	tgacagacta	acagactggt	1620
cctttccatg	ggtcttttct	gcagtcaccg	tcgtcgacct	aagaattcgc	cctttcacca	1680
tggtcagcta	ctgggacacc	gggtcctgc	tgtgcgcgct	gctcagctgt	ctgcttctca	1740
caggatctag	ttcagggttca	aaattaaaag	atcctgaact	gagtttaaaa	ggcaccacgc	1800
acatcatgca	agcaggccag	acactgcatc	tccaatgcag	gggggaagca	gcccataaat	1860
ggtctttgccc	tgaatgggtg	agtaaggaaa	gcgaaaggct	gagcataact	aaatctgcct	1920
gtggaagaaa	tggcaaacaa	ttctgcagta	ctttaacctt	gaacacagct	caagcaaacc	1980
acactggctt	ctacagctgc	aaatatctag	ctgtacctac	ttcaaagaag	aaggaaacag	2040
aatctgcaat	ctatatat	attagtata	caggtagacc	tttcgtagag	atgtacagtg	2100
aaatccccga	aattatacac	atgactgaag	gaaggagct	cgtcattccc	tgccgggtta	2160
cgtcaccta	catcactgtt	actttaaaaa	agtttccact	tgacactttg	atccctgatg	2220
gaaaacgcat	aatctgggac	agtagaaagg	gcttcatcat	atcaaataag	acgtacaaag	2280
aaatagggtt	tctgacctgt	gaagcaacag	tcaatgggca	tttgataaag	acaaactatc	2340
tcacacatcg	acaaaccaat	acaatcatag	atgtccaaat	aagcacacca	cgcccagtc	2400
aattacttag	aggccatact	cttgcctca	attgtactgc	taccactccc	ttgaacacga	2460
gagttcaaat	gacctggagt	taccctgatg	aaaaaaataa	gagagcttcc	gtaaggcgac	2520
gaattgacca	aagcaattcc	catgcccaaca	tattctacag	tgttcttact	attgacaaaa	2580
tgcagaacaa	agacaaagga	ctttataact	gtcgtgtaag	gagtggaacca	tcattcaaat	2640
ctgttaacac	ctcagtgcat	atataatgata	aagcattcat	cactgtgaaa	catcgaaaac	2700
agcaggtgct	tgaaaccgta	gctggcaagc	ggtcttaccg	gctctctatg	aaagtgaagg	2760
catttccctc	gccggaagtt	gtatggttaa	aagatgggtt	acctgcgact	gagaaatctg	2820
ctcgtatatt	gactcgtggc	tactcgttaa	ttatcaagga	cgtaactgaa	gaggatgcag	2880
ggaattatac	aatcttgctg	agcataaaac	agtcaaatgt	gtttaaaaac	ctcactgcca	2940
ctctaattgt	caatgtgaaa	cccagattt	acgaaaaggc	cgtgtcatcg	tttccagacc	3000
cggctctcta	cccactgggc	agcagacaaa	tcctgacttg	taccgcata	ggtatccctc	3060
aacctacaat	caagtgggtc	tggcaccctt	gtaaccataa	tcattccgaa	gcaagggtgtg	3120
acttttgttc	caataatgaa	gagtccttta	tcctggatgc	tgacagcaac	atgggaaaca	3180
gaattgagag	catcactcag	cgcattggca	taatagaagg	aaagaataag	atggctagca	3240
ccttggttgt	ggctgactct	agaatttctg	gaatctacat	ttgcatagct	tccaataaag	3300
ttgggactgt	gggaagaaac	ataagctttt	atatcacaga	tgtgccaaat	gggtttcatg	3360
ttaacttggg	aaaaatgccg	acggaaggag	aggacctgaa	actgtcttgc	acagttaaca	3420
agttcttata	cagagacggt	acttggtatt	tactgcggac	agttaataac	agaacaatgc	3480
actacagtat	tagcaagcaa	aaaatggcca	tcactaagga	gcactccatc	actcttaatc	3540
ttaccatcat	gaatgtttcc	ctgcaagatt	caggcaccta	tgcctgcaga	gccagggaatg	3600
tatacacagg	ggaagaaatc	ctccagaaga	aagaaattac	aatcagaggt	gagcactgca	3660
acaaaaaggc	tgttttctct	cggatctcca	aattttaaag	cacaagggaat	gattgtacca	3720
cacaaagtaa	tgtaaaacat	taaaggactc	attaaaaagt	aacagttgtc	tcatatcatc	3780
ttgatttatt	gtcactgttg	ctaactttca	ggctcaaggg	cgaattcagg	cctaagcttc	3840
ctaggatcgc	atctcgagca	agtctagaaa	gccatggata	tcggatccac	tacgcgttag	3900
agctcgtcga	tcagcctcga	ctgtgccttc	tagttgccag	ccatctgttg	tttgccttc	3960
ccccgtgcct	tccttgaccc	tgggaaggtgc	cactcccact	gtcctttcct	aataaaatga	4020
ggaaattgca	tcgcattgtc	tgagtaggtg	tcattctatt	ctgggggggtg	gggtgggggca	4080
ggacagcaag	ggggaggatt	gggaagacaa	tagcaggggg	gtgggcgaag	aactccagca	4140
tgagatcccc	gcgcgtggag	atcatccagc	tagcaagtcc	catcagtgat	ggagttggcc	4200
actccctctc	tgcgcgtcgc	ctcgtcact	gaggccgggc	gaccaaaggt	cgcccgacgc	4260
ccgggctttg	cccgggcggc	ctcagtgagc	gagcgcgcgc	gccagcgatt	ctcttgtttg	4320



ctccagactc	tcaggcaatg	acctgatagc	ctttgtagag	acctctcaaa	aatagctacc	4380
ctctccggca	tgaatttatc	agctagaacg	gttgaatata	atattgatgg	tgatttgact	4440
gtctccggcc	tttctcacc	gtttgaatct	ttacctacac	attactcagg	cattgcattt	4500
aaaatatatg	agggttctaa	aaatttttat	ccttgcggtg	aaataaaggc	ttctcccga	4560
aaagtattac	agggtcataa	tgtttttggt	acaaccgatt	tagctttatg	ctctgaggct	4620
ttattgctta	attttgctaa	ttctttgcct	tgctgtatg	atattattgga	tggttgaatt	4680
cctgatgcgg	tattttctcc	ttacgcctct	gtgcggtatt	tcacaccgca	tatggtgcac	4740
tctcagtaca	atctgctctg	atgccgcata	gttaagccag	ccccgacacc	cgccaacacc	4800
cgctgacgcg	ccctgacggg	cttgtctgct	cccggcatcc	gcttacagac	aagctgtgac	4860
cgtctccggg	agctgcatgt	gtcagagggt	ttcaccgta	tcaccgaaac	gcgcgagacg	4920
aaagggcctc	gtgatacgcc	tatttttata	ggttaatgtc	atgataataa	tggtttctta	4980
gacgtcaggt	ggcacttttc	ggggaaatgt	gcgcggaacc	cctatttggt	tatttttcta	5040
aatacattca	aatatgtatc	cgctcatgag	acaataaccc	tgataaatgc	ttcaataata	5100
ttgaaaaagg	aagagtatga	gtattcaaca	ttccggtgct	gcccttattc	ccttttttgc	5160
ggcattttgc	cttcctgttt	ttgctcacc	agaaacgctg	gtgaaagtaa	aagatgctga	5220
agatcagttg	ggtgcacgag	tgggttacat	cgaactggat	ctcaacagcg	gtaagatcct	5280
tgagagtttt	cgccccgaag	aacgttttcc	aatgatgagc	actttttaaag	ttctgctatg	5340
tggcgcggtta	ttatcccgta	ttgacgccgg	gcaagagcaa	ctcggtcgcc	gcatacacta	5400
ttctcagaat	gacttggttg	agtactcacc	agtcacagaa	aagcatctta	cggatggcat	5460
gacagtaaga	gaattatgca	gtgctgccat	aaccatgagt	gataacactg	cggccaactt	5520
acttctgaca	acgatcggag	gaccgaagga	gctaaccgct	tttttgca	acatggggga	5580
tcatgtaact	cgccttgatc	gttgggaacc	ggagctgaat	gaagccatac	caaacgacga	5640
gcgtgacacc	acgatgcctg	tagcaatggc	aacaacgttg	cgcaaactat	taactggcga	5700
actacttact	ctagcttccc	ggcaacaatt	aatagactgg	atggaggcgg	ataaagttgc	5760
aggaccactt	ctgcgctcgg	cccttcggcg	tggctggttt	attgctgata	aatctggagc	5820
cgggtgagcgt	gggtctcgcg	gtatcattgc	agcactgggg	ccagatggta	agccctcccg	5880
tatcgtagtt	atctacacga	cggggagtca	ggcaactatg	gatgaacgaa	atagacagat	5940
cgctgagata	ggtgcctcac	tgattaagca	ttggtaactg	tcagaccaag	tttactcata	6000
tatacttttag	attgatttaa	aaacttcattt	ttaattttaa	aggatctagg	tgaagatcct	6060
ttttgataat	ctcatgacca	aaatccctta	acgtgagttt	tcgttccact	gagcgtcaga	6120
ccccgtagaa	aagatcaaag	gatcttcttg	agatcctttt	tttctgcgcg	taatctgctg	6180
cttgcaaaca	aaaaaaccac	cgctaccagc	ggtggtttgt	ttgccggatc	aagagctacc	6240
aactcttttt	ccgaaggtaa	ctggcttcag	cagagcgcag	ataccaaata	ctgtccttct	6300
agtgtagccg	tagttaggcc	accacttcaa	gaactctgta	gcaccgccta	catacctcgc	6360
tctgctaate	ctgttaccag	tggctgctgc	cagtggcgat	aagtctgtgc	ttaccgggtt	6420
ggactcaaga	cgatagttac	cggataaggc	gcagcggctg	ggctgaacgg	ggggttcgtg	6480
cacacagccc	agcttgagac	gaacgaccta	caccgaactg	agatacctac	agcgtgagct	6540
atgagaaagc	gccacgcttc	ccgaaggag	aaaggcggac	aggtatccgg	taagcggcag	6600
ggtcggaaca	ggagagcgca	cgaggagct	tccaggggga	aacgcctggt	atctttatag	6660
tctgtcgggg	tttcgccacc	tctgacttga	gcgtcgattt	ttgtgatgct	cgtcaggggg	6720
gcggagccta	tggaaaaacg	ccagcaacgc	ggccttttta	cggttcctgg	ccttttgctg	6780
gccttttgct	cacatgttct	ttcctgcgtt	atccccctgat	tctgtggata	accgtattac	6840
cgcttttgag	tgagctgata	ccgctcgccg	cagccgaacg	accgagcgca	gcgagtcagt	6900
gagcgaggaa	gcggaagagc	gccaatacgc	caaaccgcct	ctccccgcgc	ggtggccgat	6960
tcattaatgc	agctggcgcg	ctcgctcgct	cactgaggcc	gccccgggcaa	agccccggcg	7020
tcgggcgacc	tttggtcgcc	cggcctcagt	gagcgagcga	gcgcgcagag	agggagtggc	7080
caactccatc	actgat					7096

&lt;210&gt; 4

&lt;211&gt; 636

&lt;212&gt; DNA

&lt;213&gt; Homo sapien

&lt;400&gt; 4

```

atggctccct tagccgaagt cgggggcttt ctgggcggcc tggagggtt gggccagcag    60
gtgggttcgc atttctgtt gcctcctgcc ggggagcggc cgccgctgct gggcgagcgc    120
aggagcgcgg cggagcggag cgcgcgcggc gggccggggg ctgcgcagct ggcgcacctg    180
cacggcatcc tgcgccgccg gcagctctat tgccgcaccg gcttccacct gcagatcctg    240
cccgcaggca gcgtgcaggg caccgcgcag gaccacagcc tcttcggtat cttggaattc    300
atcagtgtgg cagtgggact ggtcagtatt agaggtgtgg acagtgggtct ctatcttggg    360
atgaatgaca aaggagaact ctatggatca gagaaactta cttccgaatg catctttagg    420
gagcagtttg aagagaactg gtataacacc tattcatcta acatatataa acatggagac    480
actggccgca ggtattttgt ggcacttaac aaagacggaa ctccaagaga tggcgccagg    540
tccaagaggc atcagaaatt tacacatttc ttacctagac cagtggatcc agaaagagtt    600
ccagaattgt acaaggacct actgatgtac acttga                                636

```

<210> 5

<211> 211

<212> PRT

<213> Homo sapien

<400> 5

```

Met Ala Pro Leu Ala Glu Val Gly Gly Phe Leu Gly Gly Leu Glu Gly
 1          5          10          15
Leu Gly Gln Gln Val Gly Ser His Phe Leu Leu Pro Pro Ala Gly Glu
 20          25          30
Arg Pro Pro Leu Leu Gly Glu Arg Arg Ser Ala Ala Glu Arg Ser Ala
 35          40          45
Arg Gly Gly Pro Gly Ala Ala Gln Leu Ala His Leu His Gly Ile Leu
 50          55          60
Arg Arg Arg Gln Leu Tyr Cys Arg Thr Gly Phe His Leu Gln Ile Leu
 65          70          75          80
Pro Asp Gly Ser Val Gln Gly Thr Arg Gln Asp His Ser Leu Phe Gly
 85          90          95
Ile Leu Glu Phe Ile Ser Val Ala Val Gly Leu Val Ser Ile Arg Gly
100          105          110
Val Asp Ser Gly Leu Tyr Leu Gly Met Asn Asp Lys Gly Glu Leu Tyr
115          120          125
Gly Ser Glu Lys Leu Thr Ser Glu Cys Ile Phe Arg Glu Gln Phe Glu
130          135          140
Glu Asn Trp Tyr Asn Thr Tyr Ser Ser Asn Ile Tyr Lys His Gly Asp
145          150          155          160
Thr Gly Arg Arg Tyr Phe Val Ala Leu Asn Lys Asp Gly Thr Pro Arg
165          170          175
Asp Gly Ala Arg Ser Lys Arg His Gln Lys Phe Thr His Phe Leu Pro
180          185          190
Arg Pro Val Asp Pro Glu Arg Val Pro Glu Leu Tyr Lys Asp Leu Leu
195          200          205
Met Tyr Thr
210

```

<210> 6

<211> 659

<212> DNA

<213> Homo sapien

<400> 6

```

gagcgcagcc ctgatggaat ggatgagatc tagagttggg accctgggac tgtgggtccg    60

```



```

actgctgctg gctgtcttcc tgctgggggt ctaccaagca taccocatcc ctgactccag 120
ccccctcctc cagtttgggg gtcaagtccg gcagaggtac ctctacacag atgacgacca 180
agacactgaa gccacactgg agatcaggga ggatggaaca gtggtaggcg cagcacaccg 240
cagtccagaa agtctcctgg agctcaaagc cttgaagcca ggggtcattc aaatcctggg 300
tgtcaaagcc tctaggtttc tttgccaaca gccagatgga gctctctatg gatcgctca 360
ctttgatcct gaggcctgca gcttcagaga actgctgctg gaggacgggtt acaatgtgta 420
ccagtctgaa gcccatggcc tgccccctgcg tctgcctcag aaggactccc caaaccagga 480
tgcaacatcc tggggacctg tgcgcttcct gcccatgcca ggctgctcc acgagcccca 540
agaccaagca ggattcctgc cccagagacc cccagatgtg ggctcctctg accccctgag 600
catggtagag cctttacagg gccgaagccc cagctatgcg tctgactct tctgaatc 659

```

&lt;210&gt; 7

&lt;211&gt; 210

&lt;212&gt; PRT

&lt;213&gt; Homo sapien

&lt;400&gt; 7

```

Met Glu Trp Met Arg Ser Arg Val Gly Thr Leu Gly Leu Trp Val Arg
1      5      10      15
Leu Leu Leu Ala Val Phe Leu Leu Gly Val Tyr Gln Ala Tyr Pro Ile
20     25     30
Pro Asp Ser Ser Pro Leu Leu Gln Phe Gly Gly Gln Val Arg Gln Arg
35     40     45
Tyr Leu Tyr Thr Asp Asp Asp Gln Asp Thr Glu Ala His Leu Glu Ile
50     55     60
Arg Glu Asp Gly Thr Val Val Gly Ala Ala His Arg Ser Pro Glu Ser
65     70     75     80
Leu Leu Glu Leu Lys Ala Leu Lys Pro Gly Val Ile Gln Ile Leu Gly
85     90     95
Val Lys Ala Ser Arg Phe Leu Cys Gln Gln Pro Asp Gly Ala Leu Tyr
100    105    110
Gly Ser Pro His Phe Asp Pro Glu Ala Cys Ser Phe Arg Glu Leu Leu
115    120    125
Leu Glu Asp Gly Tyr Asn Val Tyr Gln Ser Glu Ala His Gly Leu Pro
130    135    140
Leu Arg Leu Pro Gln Lys Asp Ser Pro Asn Gln Asp Ala Thr Ser Trp
145    150    155    160
Gly Pro Val Arg Phe Leu Pro Met Pro Gly Leu Leu His Glu Pro Gln
165    170    175
Asp Gln Ala Gly Phe Leu Pro Pro Glu Pro Pro Asp Val Gly Ser Ser
180    185    190
Asp Pro Leu Ser Met Val Glu Pro Leu Gln Gly Arg Ser Pro Ser Tyr
195    200    205
Ala Ser
210

```

&lt;210&gt; 8

&lt;211&gt; 5974

&lt;212&gt; DNA

&lt;213&gt; Homo sapien

&lt;400&gt; 8

```

aaaacttgcg gccgcggaat ttcgactcta ggccattgca tacgttgtat ctatatcata 60
atatgtacat ttatattggc tcatgtccaa tatgaccgcc atgttgacat tgattattga 120

```

ctagttatta	atagtaatca	attacggggt	cattagttca	tagcccatat	atggagttcc	180
gcgttacata	acttacggta	aatggcccg	ctggctgacc	gcccacgac	ccccgccc	240
tgacgtcaat	aatgacgtat	gttcccatag	taacgccaat	agggactttc	cattgacgtc	300
aatgggtgga	gtatttacgg	taaactgccc	acttggcagt	acatcaagt	tatcatatgc	360
caagtccgcc	ccctattgac	gtcaatgacg	gtaaatggcc	cgctggcat	tatgcccagt	420
acatgacctt	acgggacttt	cctacttggc	agtacatcta	cgtattagtc	atcgctatta	480
ccatgggtgat	gcgggttttg	cagtacacca	atgggcgtgg	atagcggttt	gactcacggg	540
gatttccaag	tctccacccc	attgacgtca	atgggagttt	gttttggcac	caaaatcaac	600
gggacttttc	aaaatgtcgt	aataacccc	ccccgttgac	gcaaatgggc	ggtaggcgtg	660
tacggtggga	ggtctatata	agcagagctc	gtttagtga	ccgtcagatc	gcctggagac	720
gccatccacg	ctgttttgac	ctccatagaa	gacaccggga	ccgatccagc	ctccgcgccc	780
gggaacgggtg	cattggaacg	cggattcccc	gtgccaagag	tgacgtaagt	accgcctata	840
gactctatag	gcacacccct	ttggctctta	tgcatgctat	actgtttttg	gcttggggcc	900
tatacacccc	cgctccttat	gctataggtg	atggtatagc	ttagcctata	ggtgtggggt	960
attgaccatt	attgaccact	cccctattgg	tgacgatact	ttccattact	aatccataac	1020
atggctcttt	gccacaacta	tctctattgg	ctatatgcc	atactctgtc	cttcagagac	1080
tgacacggac	tctgtatttt	tacaggatgg	ggtccattta	ttatttacia	attcacatat	1140
acaacaacgc	cgtcccccg	gcccgcagtt	tttattaaac	atagcgtggg	atctccgaca	1200
tctcgggtac	gtgttccgga	catgggctct	tctccggtag	cgccggagct	tccacatccg	1260
agccctggte	ccatccgtcc	agcggctcat	ggtecgctcg	cagctccttg	ctcctaacag	1320
tggaggccag	acttaggcac	agcacaatgc	ccaccaccac	cagtgtgccg	cacaaggccg	1380
tggcggtagg	gtatgtgtct	gaaaatgagc	tccgagattg	ggctcgacc	tggacgcaga	1440
tggaagactt	aaggcagcgg	cagaagaaga	tgaggcagc	tgagttgttg	tattctgata	1500
agagtccag	gtaactccc	ttgcgggtgt	gttaacgggtg	gagggcagtg	tagtctgagc	1560
agtactcggt	gctgcgcgc	gcgccaccag	acataatagc	tgacagacta	acagactgtt	1620
cctttccatg	ggtcttttct	cgagtcaccg	tgcgcgacct	aagaattcag	gtatggctgc	1680
tggttctatc	actaccctgc	cagctctgcc	agaagacggg	ggttctgggtg	ccttcccacc	1740
aggtaacttc	aaagacccaa	aacgtctgta	ctgcaaaaac	ggtggtttct	tcttgcgcac	1800
ccaccccgac	ggccgagtg	acggggctcg	cgagaagagc	gacccacaca	tcaaactaca	1860
acttcaagca	gaagagagag	gggttgtgtc	tatcaaagga	gtgtgtgcaa	accgttacct	1920
tgctatgaaa	gaagatggaa	gattactagc	ttctaaatgt	gttacagacg	agtgtttctt	1980
ttttgaacga	ttggagtcta	ataactacaa	tacttaccgg	tcaaggaaat	acaccagttg	2040
gtatgtggca	ctgaaacgaa	ctgggcagta	taaacttgg	tccaaaacag	gacctgggca	2100
gaaagctata	ctttttcttc	caatgtctgc	taagagctga	tcttaatggc	agcatctgat	2160
ctcattttac	atgaagcttc	ctaggtatcg	atctcgagca	agtctagaaa	gccatggata	2220
tccgatccac	tacgcgttag	agctcgctga	tcagcctcga	ctgtgccttc	tagttgccag	2280
ccatctgttg	tttgcctctc	ccccgtgcct	tccttgacct	tggaaagggtg	cactcccact	2340
gtcctttcct	aataaaatga	ggaaattgca	tgcattgtc	tgagtaggtg	tcattctatt	2400
ctgggggggtg	gggtggggca	ggacagcaag	ggggaggatt	gggaagacaa	tagcaggggg	2460
gtgggcgaag	aactccagca	tgagatcccc	gcgctggagg	atcatccagc	tagcaagtcc	2520
catcagtgat	ggagttggcc	actccctctc	tgcgcgctcg	ctcgctcact	gaggccgggc	2580
gaccaaagg	cgcccgacgc	ccgggccttg	cccgggcggc	ctcagtgagc	gagcgagcgc	2640
gccagcgatt	ctcttgtttg	ctccagactc	tcaggcaatg	acctgatagc	ctttgtagag	2700
acctctcaaa	aatagctacc	ctctccggca	tgaatttatc	agctagaacg	gttgaatatc	2760
atattgatgg	tgatttgact	gtctccggcc	tttctcacc	gtttgaatct	ttacctacac	2820
attactcagg	cattgcattt	aaaatatatg	agggttctaa	aaatttttat	ccttgcggtg	2880
aaataaaggc	ttctcccgca	aaagtattac	agggtcataa	tgtttttggt	acaaccgatt	2940
tagctttatg	ctctgaggct	ttattgctta	attttgctaa	ttctttgcct	tgcctgtatg	3000
atttattgga	tggttgaatt	cctgatgcgg	tattttctcc	ttacgcatct	gtgcggtatt	3060
tcacaccgca	tatggtgcac	tctcagtaca	atctgctctg	atgccgcata	gttaagccag	3120
ccccgacacc	cgccaacacc	cgctgacgcg	ccctgacggg	cttgtctgct	cccggcatcc	3180
gcttacagac	aagctgtgac	cgtctccggg	agctgcatgt	gtcagagggt	ttcaccgctc	3240
tcaccgaaac	gcgcgagacg	aaagggcctc	gtgatacgcc	tatttttata	ggttaatgtc	3300
atgataataa	tggtttctta	gacgtcaggt	ggcacttttc	ggggaaatgt	gcgcggaacc	3360

cctatttgtt	tatttttcta	aatacattca	aatatgtatc	cgctcatgag	acaataaccc	3420
tgataaatgc	ttcaataatg	taccggtcaa	gaaggcgata	gaaggcgatg	cgctgcgaat	3480
cgggagcggc	gataccgtaa	agcacgagga	agcggtcagc	ccattcgctt	cagcaatatac	3540
acgggtagcc	aacgctatgt	cctgatagcg	gtccgccaca	cccagccggc	cacagtcgat	3600
gaatccagaa	aagcggccat	tttccaccat	gatattcggc	aagcaggcat	cgccatgggt	3660
cacgacgaga	tcctcgccgt	cgggcatgcy	cgccttgagc	ctggcgaaca	gttcggctgg	3720
cgcgagcccc	tgatgctctt	cgtccagatc	atcctgatcg	acaagaccgg	cttccatccg	3780
agtacgtgct	cgctcgatgc	gatgtttcgc	ttggtggctg	aatgggcagg	tagccggatc	3840
aagcgtatgc	agccgccgca	ttgcatcagc	catgatggat	actttctcgg	caggagcaag	3900
gtgagatgac	aggagatcct	gccccggcac	ttcgcccaat	agcagccagt	cccttcccgc	3960
ttcagtgaca	acgtcgagca	cagctgcgca	aggaacgccc	gtcgtggcca	gccacgatag	4020
ccgcgctgcc	tcgtcctgca	gttcattcag	ggcaccggac	aggtcggctc	tgacaaaaag	4080
aaccggggcg	ccctgcgctg	acagccggaa	cacggcggca	tcagagcagc	cgattgtctg	4140
ttgtgcccag	tcatagccga	atagcctctc	cacccaagcg	gccggagaac	ctgcgtgcaa	4200
tccatcttgt	tcaatcatgc	gaaacgatcc	tcacctctgc	tcttgatcag	atcttgatcc	4260
cctgcgccat	cagatccttg	gcggcaagaa	agccatccag	tttactttgc	agggcttccc	4320
aaccttacca	gagggcgccc	cagctggcaa	ttccggttcg	cttgctgtcc	ataaaaaccgc	4380
ccagtctagc	tatcgccatg	taagcccact	gcaagctacc	tgctttctct	ttgcgcttgc	4440
gttttccctt	gtccagatag	cccagtagct	gacattcatc	cggggtcagc	accgtttctg	4500
cggactggct	ttctacgtgt	tcgcttctct	ttagcagccc	ttgcgccctg	agtgttgcg	4560
gcagcgtgaa	gctgtcaatt	ccgcgttaaa	tttttgtaa	atcagctcat	tttttaacca	4620
ataggccgaa	atcggcaaaa	tcctttataa	atcaaaaagaa	tagcccagaa	tagggttgag	4680
tgttggtcca	gtttggaaca	agagtcactc	attaaagaac	gtggactcca	acgtcaaagg	4740
gcgaaaaacc	gtctatcagg	gcgatggcgg	atcagcttat	gcggtgtgaa	ataccgcaca	4800
gatgcgtaag	gagaaaatac	cgcacatagg	gctcttccgc	ttcctcgctc	actgactcgc	4860
tgcgctcggt	cgttcggctg	cggcgagcgg	tatcagctca	ctcaaaggcg	gtaatacggg	4920
tatccacaga	atcaggggat	aacgcaggaa	agaacatgcg	gcgcgccaca	tgtgagcaaa	4980
aggccagcaa	aaggccagga	accgtaaaaa	ggcgcggttg	ctggcgtttt	tccataggct	5040
ccgccccctt	gacgagcatc	acaaaaatcg	acgctcaagt	cagaggtggc	gaaacccgac	5100
aggactataa	agataaccagg	cgtttcccc	tggaagctcc	ctcgtgcgct	ctcctgttcc	5160
gacctgcgcg	cttaccggat	acctgtccgc	ctttctccct	tcgggaagcg	tggcgctttc	5220
tcatagctca	cgtgttaggt	atctcagttc	ggtgtaggtc	gttcgctcca	agctgggctg	5280
tgtgcacgaa	cccccggttc	agcccagacc	ctgcgcctta	tcgggtaact	atcgtcttga	5340
gtccaacccg	gtaagacacg	acttatcgcc	actggcagca	gccactggta	acaggattag	5400
cagagcgagg	tatgtaggcg	gtgctacaga	gttcttgaag	tggtggccta	actacggcta	5460
cactagaagg	acagtatttg	gtatctgcgc	tctgctgaag	ccagttacct	tcggaaaaag	5520
agttggtagc	tcttgatccg	gcaaacaaac	caccgctggg	agcggcggtt	ttttgtttgc	5580
aagcagcaga	ttacgcgcag	aaaaaaagga	tctcaagaag	atcctttgat	cttttcttac	5640
tgaacggtga	tccccaccgg	aattgcggcc	catgttcttt	cctgcgttat	cccctgattc	5700
tgtggataac	cgtattaccg	cctttgagtg	agctgatacc	gctcgccgca	gccgaacgac	5760
cgagcgcagc	gagtcagtga	gcgaggaagc	ggaagagcgc	ccaatacgca	aaccgcctct	5820
ccccgcgcgt	tggccgattc	attaatgcag	ctggcgcgct	cgctcgctca	ctgaggccgc	5880
ccgggcaaaag	cccgggcgctc	gggcgacctt	tggtcgcccc	gcctcagtga	gcgagcgagc	5940
gcgcagagag	ggagtggcca	actccatcac	tgat			5974

&lt;210&gt; 9

&lt;211&gt; 41

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Oligonucleotide used for PCR amplification

&lt;400&gt; 9

ggtattttaa acttgcggcc gcggaatttc gactctaggc c

41

<210> 10

<211> 50

<212> DNA

<213> Artificial Sequence

<220>

<223> Oligonucleotide used for PCR amplification

<400> 10

gctgcccgga acttgctagc tggatgatcc tccagcgagg ggatctcatg

50

<210> 11

<211> 42

<212> DNA

<213> Artificial Sequence

<220>

<223> PCR primer

<400> 11

agatataagc ttaccatggg tgaaaagcgt ctgccccca aa

42

<210> 12

<211> 42

<212> DNA

<213> Artificial Sequence

<220>

<223> PCR primer

<400> 12

cgcgcgctcg agaccatgag gaatattatc caaagcgaaa ct

42